

ARROW ARUM

Peltandra virginica (L.) Kunth.

Plant Symbol = PEVI

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Uses

Expansive stands of arrow arum often develop in the marginal waters it inhabits. The foliage and stems in these stands create a wave deflecting or buffering barrier, while the root masses knit together and stabilize the submerged sediments. The roots and shoots translocate methane from the substrate. Arrow arum fruit is a preferred food of wood ducks, and is also eaten by muskrats and rails. The foliage is seldom damaged, providing good cover to waterfowl, wading birds, insects, and aquatic mammals.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

The bright green, smooth, succulent, arrow- to heart-shaped leaves of arrow arum (*Peltandra virginica*) emerge annually from perennial bulbs. The bulbs are

tufted with thick fibrous roots. The 4 to 30 inch long ascending leaves are 3 to 8 inches wide, and have three prominent veins with an abrupt, sharp tip.

Arrow arum is monoecious, with both male and female parts contained in a partially closed 4 to 8 inch green spathe. It blooms from May to July. As the fruit matures the entire flowering stem curves downward, immersing the spathe. The green berry-like fruit is up to 1/2 inch long, and usually contains one seed. Upon separation from the flowering stem, this floatable fruit begins to turn black.

Adaptation and Distribution

The native range of arrow arum is from Maine to Ontario and Michigan, south to Florida, Louisiana, and Missouri. It commonly inhabits shallow water areas of marshes, bogs, swamps, stream and river bottoms, lakes, ponds, and ditches. This emergent requires unconsolidated silty or organic sites, which are open, and saturated or inundated up to 1 foot. It will tolerate pHs of 3.0 to 9.5, and salinity up to 2 ppt.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Arrow arum predominantly relies on its seed production for re-establishment and population distribution, but it can be propagated vegetatively. There are an average of 500 cleaned seeds per pound. When the fruit of this species falls into or is stored in water, the fruit coating swells and ruptures. The seed separates, sinks, then begins to germinate if site conditions are adequate. This same seedling development process can easily be replicated in cultivated fields or in greenhouses.

Vegetative propagation is by root bulb divisions. The bulbs form in layers around a root mass, which may be as deep as 8 inches. Once dug, the bulbs are broken from the root mass, then either directly planted or transplanted into containers or production beds. One mature plant may produce up to ten of these planting units.

Management

If planted into soils with low organic contents, arrow arum responds well to applications of commercial fertilizer. Only marginal effect is expected with the

addition of fertilizers on adequate sites. To sustain good vigorous plant growth, soils must be deep and maintained at the saturation point, or inundated to a depth shallower than the leaves. Once established, this species tolerates partial shade, but young seedlings need direct sunlight. If managing for seed production, timely harvest is necessary, since ripe fruit are readily consumed by wood ducks and muskrats. No other damaging pests have been documented or observed.

In the Northeast, arrow arum grows in association with facultative wetland trees and shrubs, wild rice, woolgrass, burreeds, and soft rush. In shallower open water it often is over topped by aggressive rhizomatous species.

Cultivars, Improved, and Selected Materials (and area of origin)

No known varieties are available, but wetland nurseries carry local or regional ecotypes.

Prepared By & Species Coordinator:

USDA NRCS Northeast Plant Materials Program

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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